# LPC-02

## Expansion Module for Two RS232 connectors and Two RS232/422/485 connectors (5V or 12V)

## Quick Guide

### Key Features

- Supports up to four COM connectors
- Compatible with mainboards with standard LPC pin header

The VIA LPC-02 is an expansion module designed for connecting up to four external serial devices to existing VIA EPIA mainboards.

## Specifications:

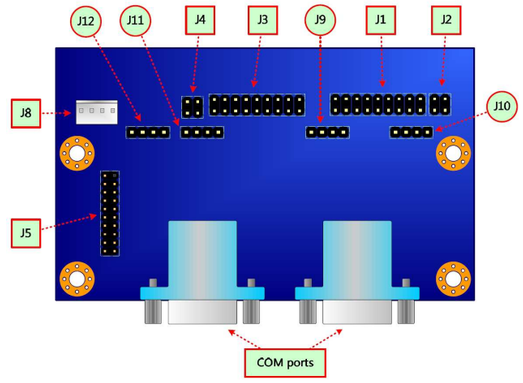
- **I/O Coastline Connectors**
  - 4 x COM connectors (9-pin D-sub connector)
    - Support RS232/422/485 interface (COM1 to COM2)
    - Support RS232 interface (COM3 to COM4)
    - Support 5V/12V voltage select for COM1 to COM4
- **Dimension**
  - 100 mm x 60 mm

## Packing List:

- 1 x LPC-02 module
- 1 x LPC cable

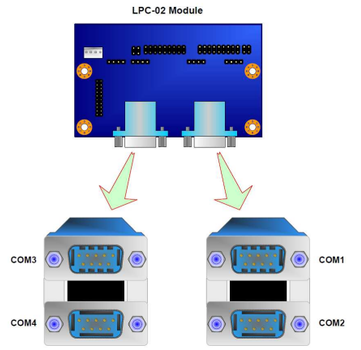
**Note:**
Please ensure that all items in the packing list are present before using this product. If any of the items are missing or damaged, contact your distributor or sales representative immediately.

## LPC-02 Module Layout




## Connector and Pin Header Definition

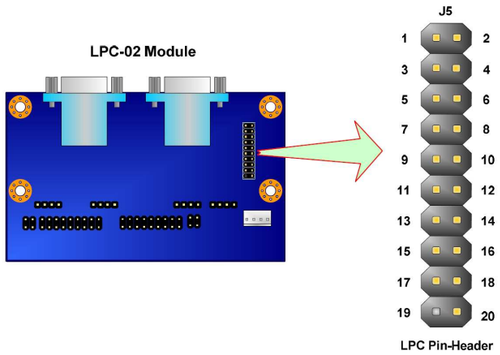
### LPC Serial Connectors (COM connectors)




| Pin | Signal | | |
|---|---|---|---|
| | RS232 | RS422 | RS485 |
| 1 | DCD | -TX | -TX |
| 2 | RXD | TX | TX |
| 3 | TXD | RX | - |
| 4 | DTR | -RX | - |
| 5 | GND | GND | GND |
| 6 | DSR | - | - |
| 7 | RTS | - | - |
| 8 | CTS | - | - |
| 9 | RI | - | +12V |

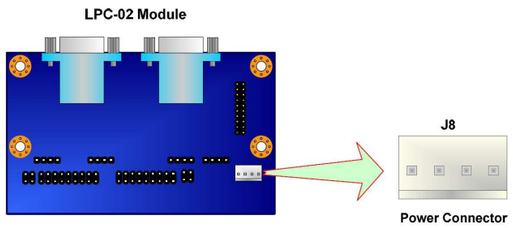
**Note:**
COM3 and COM4 connectors are dedicated only to support RS232 standard interface. While COM1 and COM2 connectors are selectable for RS232/422/485 interfaces.

## J5: LPC pin header



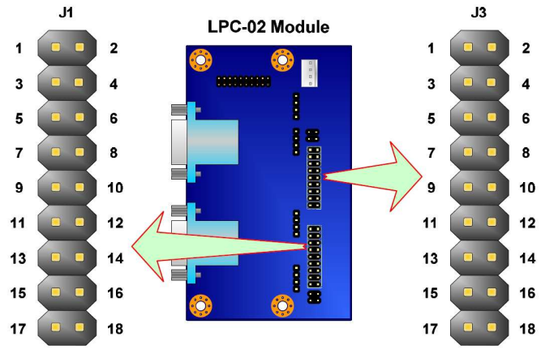

| Pin | Signal | Pin | Signal |
|---|---|---|---|
| 1 | LAD1 | 2 | LPC_33CLK |
| 3 | -PCIRSTX | 4 | GND |
| 5 | LAD0 | 6 | 2448_CLK |
| 7 | LAD2 | 8 | GND |
| 9 | SERIRQ | 10 | LAD3 |
| 11 | -LDRQ1 | 12 | -EXTSMI |
| 13 | +5V | 14 | +3V |
| 15 | +5V | 16 | +3V |
| 17 | GND | 18 | GND |
| 19 | Key pin | 20 | -LFRAME |

## J8: Power connector



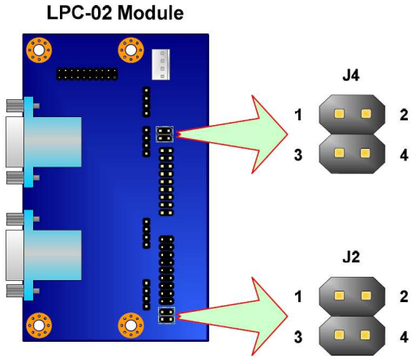

| Pin | Signal |
|---|---|
| 1 | +5V |
| 2 | GND |
| 3 | GND |
| 4 | +12V |

## J1, J2, J3 and J4: COM2 and COM3 select interface jumpers




### J1 and J3 jumpers

| Pin | Signal | Pin | Signal |
|---|---|---|---|
| 1 | RXD1 | 2 | RXD_232-1 |
| 3 | RXD1 | 4 | RXD_422-1 |
| 5 | RXD1 | 6 | RXD_485-1 |
| 7 | IC_DCD1 | 8 | IC_RXD1 |
| 9 | COM_DCD1 | 10 | COM_RXD1 |
| 11 | 1-RS485-RS422_-TX | 12 | 1-RS485-RS422_TX |
| 13 | IC_TXD1 | 14 | IC_DTR1 |
| 15 | COM_TXD1 | 16 | COM_DTR1 |
| 17 | 1-RS422_RX | 18 | 1-RS422_-RX |



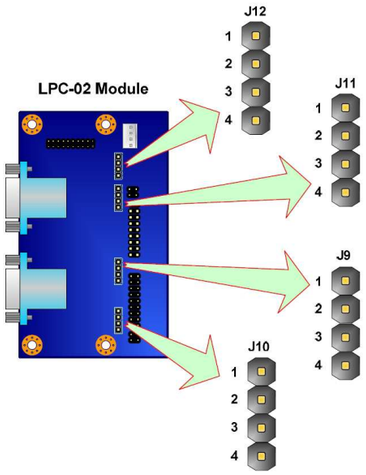

### J2 jumper

| Pin | Signal | Pin | Signal |
|---|---|---|---|
| 1 | RXD_422-2 | 2 | RXD_LED2 |
| 3 | RXD_485-2 | 4 | RXD_LED2 |

### J4 jumper

| Pin | Signal | Pin | Signal |
|---|---|---|---|
| 1 | RXD_422-1 | 2 | RXD_LED1 |
| 3 | RXD_485-1 | 4 | RXD_LED1 |

## J9, J10, J11 & J12: COM voltage select jumper

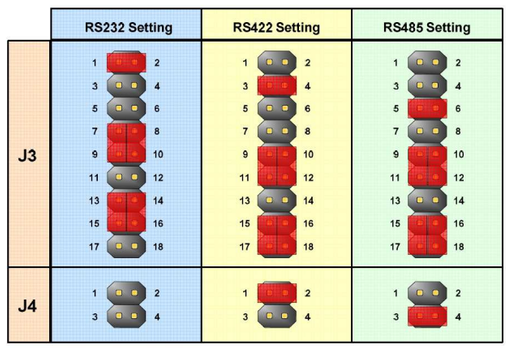



J9, J10, J11, and J12 jumpers

| Pin | Signal |
|---|---|
| 1 | +5V |
| 2 | GND |
| 3 | GND |
| 4 | +12V |

## J3 and J4 jumper settings

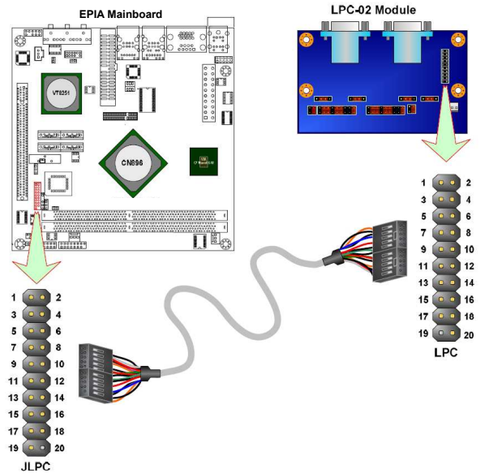
J3 and J4 jumpers are for COM1 connector. Both J3 and J4 jumpers controls the selection of standard interface such as RS232, RS422 and RS485.




# Connecting LPC Cable

## Step 1

Connect the board-to-board LPC cable connector to the LPC pin header (J5) on the LPC-02 module.




## Step 2

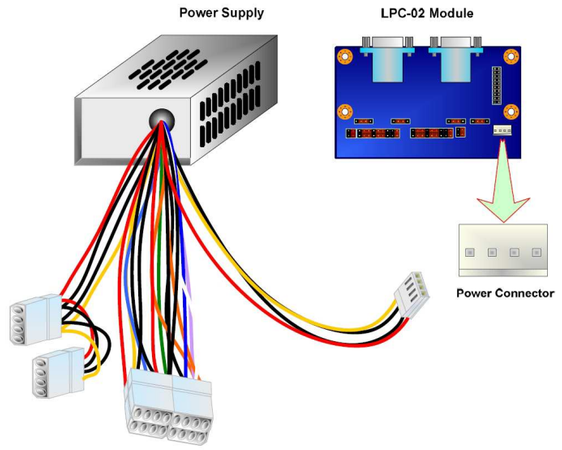
Connect the other end of the board-to-board LPC cable connector to the JLPC pin header on the EPIA mainboard.

**Note:**
The configuration of JLPC pin header can be found in EPIA mainboard's user manual.

# Connecting Power Connector

## Step 1

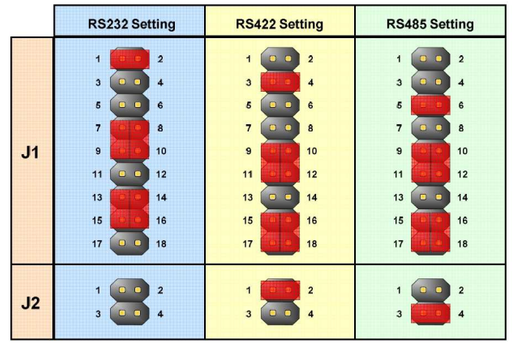
Connect the (4-pin) power input connector to the power connector (J8) on the LPC-02 module.




# Jumper Settings

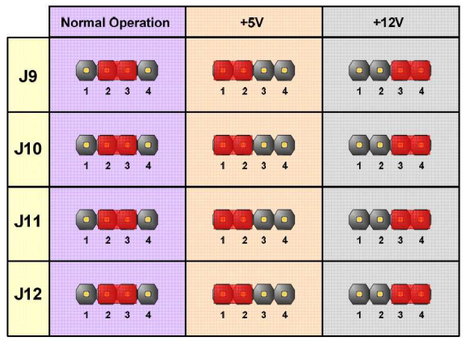
## J1 and J2 jumper settings

J1 and J2 jumpers are for COM2 connector. Both J1 and J2 jumpers controls the selection of standard interface such as RS232, RS422 and RS485.




## J9, J10, J11 and J12 jumper settings

Jumpers J9, J10, J11 and J12 are voltage select jumpers for COM connectors.




**Notes:**
J9 : Voltage select jumper for COM connector 1 (COM1)
J10 : Voltage select jumper for COM connector 2 (COM2)
J11 : Voltage select jumper for COM connector 3 (COM3)
J12 : Voltage select jumper for COM connector 4 (COM4)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